IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claim 1 in accordance with the following:

1. (Currently Amended) A wireless sensor incorporated bearing assembly comprising:

a bearing including a stationary outer race member and a rotatable race member;

a magnetic target of detection;

a wireless sensor unit; and

a sensor unit mounting device to removably mount the sensor unit on the stationary outer race member of the bearing,

wherein the sensor unit is of one-piece construction and includes a plurality of sensor sections to magnetically detect athe target of detection, a single signal transmitting circuit to transmit wirelessly sensor signals outputted from the sensor sections, and a single transmitting antenna,

the sensor unit includes, as an electric power supply section to drive the sensor section and the signal transmitting circuit, an electric power receiving section to receive an electric power wirelessly, ~~and~~

the sensor unit mounting device includes a fixing ring mounted on the stationary race member, a socket portion provided in the fixing ring to allow the sensor unit to be removably inserted in a radial direction of the bearing, and a retaining portion provided ~~in~~on the fixing ring or the socket portion to elastically retain the sensor unit inserted into the socket portion,

the sensor unit mounting device is made of a non-magnetic material and covers an end opening of the stationary outer race, and

the sensor unit is arranged in face-to-face relation with the target with the sensor unit mounting device interposed therebetween.

2-3. (Cancelled)

4. (Previously Presented) The wireless sensor incorporated bearing assembly as claimed in claim 1, wherein the sensor section includes a revolution sensor, the revolution sensor including a pulsar ring for generating a cyclic magnetic change in a circumferential direction of the pulsar ring and a magnetic sensor fitted in face-to-face relation to the pulsar ring; and

the sensor unit includes the magnetic sensor while the pulsar ring is fitted to the rotatable race member.

5. (Cancelled)

6. (Previously Presented) The wireless sensor incorporated bearing assembly as claimed in claim 1, wherein the bearing is a rolling bearing including a plurality of rows of rolling elements interposed between the stationary and rotatable race members.

7. (Previously Presented) The wireless sensor incorporated bearing assembly as claimed in claim 6, wherein the rolling bearing is a wheel support bearing assembly used for rotatably supporting a vehicle wheel relative to a vehicle body structure, the wheel support bearing assembly comprising an outer member having a plurality of raceway surfaces and defining the stationary race member, an inner member having raceway surfaces confronting with the raceway surfaces in the outer member and defining the rotatable race member, and a plurality of rows of rolling elements interposed between the mutually confronting raceway surfaces in the outer and inner members.

8. (Previously Presented) The wireless sensor incorporated bearing assembly as claimed in claim 1, wherein respective sensor signals from the sensor sections are transmitted as superimposed.

9. (Previously Presented) The wireless sensor incorporated bearing assembly as claimed in claim 1, wherein respective sensor signals from the sensor sections are transmitted on a time division basis.